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ABSTRACT

The design of the Ohio State University undergraduate program in industrial technology education features innovation in the design of substantive courses and their sequence within the field of specialization. The program consists of a foundation core, an intermediate core, and advanced elective specialization. (Descriptions of each course within these three areas are provided.) The purposes of the instruction in the industrial arts major are to enable students to (a) understand the concepts, principles, generalizations, problems, and strategies of industrial technology; (b) have an interest in and appreciation for industry as that element of the economic system which provides industrial material goods for the satisfaction of human wants for those goods; and (c) demonstrate knowledge and skills that will be useful in the life situations of the industrial arts teacher. (PB)

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DISTINGUISHED ACHIEVEMENT AWARD ENTRY

The Ohio State University
College of Education
Academic Faculty of Industrial Technology Education
November 22, 1974

Summary

The Ohio State University undergraduate program in Industrial Technology Education is especially innovative in its design of the substantive courses and sequence within the field of specialization. Approved by the University and officially adopted in Autumn, 1971, the general design already has been copied by such institutions as Pennsylvania State University and Colorado State University. In addition, the philosophical foundation which directed the redesign has been recognized by more than one hundred colleges and universities across America inasmuch as each has cooperatively taught workshops for which Ohio State University has:

1. developed the syllabus and
2. provided special inservice education for resident faculty (see Attachment "A" Summer 1974 Workshops, for a listing of institutions and faculty).

The program concept grew out of research which was conducted in 1965-66*. The program elements were conceptualized, developed, and pilot tested in the era 1966-1971.

The technical sequence is integrated throughout the four-year program. The elements of the technical program are conceptually interrelated and mutually reinforcing, a unique value of this design. The program, while basically designed

* USOE Contract 5-85-066 report A Rationale and Structure for Industrial Arts Subject Matter, ED 013 955, November, 1966.

to advance the professional practice of the teaching of industrial arts into the twentieth century, still meets general industrial arts teacher certification requirements and prepares practitioners to teach the full continuum from manual training to industrial arts to industrial technology.

Since the implementation of this new program, calls for graduates have been received from coast to coast. Recent graduates are teaching in such widespread locations as Idaho, Illinois, New Jersey, Florida, Colorado, and American International Schools in Europe. There is probably general recognition within industrial arts teacher education that no other program in the past decade has impacted upon the profession as much as has this one.

Attachment "A"

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Industrial Arts Curriculum Project

Summer 1974 Workshops

THE WORLD OF

Construction

THE WORLD OF

Manufacturing

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Here is the 1974 Summer Teacher Education Workshop schedule for the Industrial Arts Curriculum Project (IACP) courses, THE WORLD OF CONSTRUCTION and THE WORLD OF MANUFACTURING.

All workshops will offer graduate credit and will be open to teachers, administrators, supervisors and others who wish to:

understand IACP rationale and course content

to learn how to utilize behavioral objectives, role playing, production scheduling and other effective teaching techniques

to gain a working knowledge of management and production practices utilized in the construction and manufacturing industries

to become familiar with the teaching procedures, student activities and instructional materials used in THE WORLD of CONSTRUCTION and THE WORLD OF MANUFACTURING courses.

Over 120 workshops will be held through the country and Canada.

Application kits and information about tuition, fees, housing, etc. can be obtained directly from the workshop directors listed. Please note that certain workshops have been scheduled for participants from particular geographical areas.

WORLD OF CONSTRUCTION Summer 1974 Workshops

Location and Sponsoring Institution	*Workshop Dates*	*For Application Kit, Write:*
ALABAMA		
Auburn Auburn University	July 8 to July 26	Dr. Wiley G. Hartzog, Jr. Auburn University 5028 Haley Center Auburn, Al. 36830
ARIZONA		
Flagstaff Northern Arizona University	June 10 to June 28	Dr. Gerald Rau Dept. of Ind. Education Northern Az. University Flagstaff, Az. 86001
Tempe Arizona State University	July 8 to July 23	Mr. Marlow Keith Division of Technology Arizona State University Tempe, Az. 85281
CALIFORNIA		
Angwin Pacific Union College	June 16 to June 28	Mr. Paul Fleming Dept. of Ind. Education Pacific Union College Angwin, Ca. 94508
Long Beach CSU - Long Beach	July 22 to August 2	Dr. Irvin T. Lathrop Ind. Educ. Department CSU - Long Beach Long Beach, Ca. 90840
San Jose CSU - San Jose	June 24 to July 12	Dr. Donald Betando Ind. Studies Department CSU - San Jose San Jose, Ca. 95114

WORLD OF CONSTRUCTION Summer 1974 Workshops

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Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
COLORADO		
Fort Collins Colorado State University	June 10 to July 12	Mr. James Parnell Dept. of Ind. Sciences Colorado State University Ft. Collins, Co. 80521
Greeley University of Northern Colorado	July 15 to August 9	Dr. David Olson Dept. of Industrial Arts University of No. Colorado Greeley, Co. 80639
Gunnison Western State College	July 1 to July 12	Dr. Bernard Dutton Ind. Arts Department Western State College Gunnison, Co. 81230
Pueblo Southern Colorado State College	June 17 to July 19	Professor Charles Tedrow Area of Ind. Teacher Educ. So. Colo. State College Pueblo, Co. 81004
FLORIDA		
Tampa University of Tampa	June 10 to June 21	Dr. Harry Walston Dept. of Industrial Arts University of Tampa Tampa, Fl. 33606
GEORGIA		
Mount Berry Berry College	July 25 to August 9	Dr. James N. Lutton Berry College P. O. Box 490 Mount Berry, Ga. 30149
Statesboro Georgia Southern College	July 8 to July 26	Mr. John Martin Ind. Arts Department Ga. Southern College Statesboro, Ga. 30458
ILLINOIS		
Chicago Chicago State University	July 1 to August 23	Dr. Norman G. Laws Dept. of Occup. Education Chicago State University Chicago, Il. 60628
Normal Illinois State University	June 24 to July 19	Dr. Wayne Zook Dept. of Ind. Technology Illinois State University Normal, Il. 61761
INDIANA		
Muncie Ball State University	June 10 to July 12	Dr. Jake Reams Dept. of Ind. Ed. & Tech. Ball State University Muncie, In. 47306
Terre Haute Indiana State University	July 22 to August 9	Dr. Larry Browder School of Technology Indiana State University Terre Haute, In. 47809
West Lafayette Purdue University	June 3 to June 14 PM Only	Dr. J. L. Wircenski Dept. of Ind. Education Purdue University West Lafayette, In. 47907

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WORLD OF CONSTRUCTION Summer 1974 Workshops

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
IOWA		
Cedar Falls University of Northern Iowa	July 8 to July 19	Dr. Douglas Pine Industrial Arts & Tech. Univ. of Northern Iowa Cedar Falls, Ia. 50613
Ames Iowa State University	July 29 to August 14	Dr. Walter Bortz Ind. Educ. Department Iowa State University
KANSAS		
Emporia Kansas State Teachers College	June 3 to July 5	Dr. Charles Bell Ind. Educ. Department Ks. State Teachers College Emporia, Ks. 66801
Pittsburg Kansas State College	June 3 to June 28	Mr. Edwin Koehler Dept. of Ind. Arts Educ. Kansas State College Pittsburg, Ks. 66762
Wichita Wichita State University	July 8 to July 26	Mr. Edgar L. Webb Ind. Educ. Department Wichita State University Wichita, Ks. 67208
KENTUCKY		
Bowling Green Western Kentucky University	July 8 to July 29	Dr. Robert Eversoll Dept. of In. Educ. & Tech Western Ky. University Bowling Green, Ky. 4210[illegible]
Morehead Morehead State University	July 9 to August 2	Dr. Norman N. Roberts Dept. of Ind. Education Morehead State University Morehead, Ky. 40351
LOUISIANA		
Baton Rouge Louisiana State University	June 12 to July 3	Mr. D. D. Gamble Ind. & Tech. Department Louisiana State University Baton Rouge, La. 70803
Hammond Southeastern Louisiana Univ.	May 13 to May 31	Dr. Charles R. Bass Ind. Tech. Department Southeastern La. University Hammond, La. 70401
Natchitoches Northwestern State University	June 3 to June 21	Dr. Needom C. Muns Northwestern State Univ. Dept. Of Ind. Ed. & Tech. Natchitoches, La. 71457
MAINE		
Gorham University of Maine at Portland-Gorham	July 15 to August 2	Mr. Howard M. Faulkner Dept. of Ind. Educ & Tech University of Maine at Portland-Gorham Gorham, Me. 04038
MASSACHUSETTS		
Fitchburg Fitchburg State College	July 8 to July 19	Dr. George B. James Ind. Arts Department Fitchburg State College Fitchburg, Ma. 01420

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WORLD OF CONSTRUCTION Summer 1974 Workshops

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
MICHIGAN		
East Lansing Michigan State University	July 8 to July 23	Dr. G. W. Fern Dept. of Sec. Educ. Curriculum - Ind. Ed. Michigan State University East Lansing, Mi. 48823
Marquette Northern Michigan University	June 17 to June 28	Dr. K. A. Wahtera Dept. of Ind. & Tech. Northern Mich. University Marquette, M.. 49855
MINNESOTA		
Bemidji Bemidji State College	July 12 to July 19	Dr. Robert G. Anderson Bemidji State College Ind. Educ. Department Bemidji, Mn. 56601
Mankato Mankato State College	June 27 to July 12	Mr. Iver Johnson Mankato State College Ind. & Technical Studies Mankato, Mn. 56001
MISSOURI		
Cape Girardeau Southeast Missouri State University	June 17 to July 5	Dr. Don Amelon Dept. of In. & Tech Educ. Southeastern Missouri State University Cape Girardeau, Mo. 63701
Kirksville Northeast Missouri State University	August 5 to August 16	Mr. Arthur E. Harrington Dept. of Ind. Education NE Missouri State Univ. Kirksville, Mo. 63501
NEBRASKA		
Kearney Kearney State College	June 24 to July 12	Dr. Ora Lindau Dept. of Ind. Education Kearney State College Kearney, Nb. 68847
Omaha University of Nebraska at Omaha	July 15 to August 16	Dr. Harold L. Davis Dept. of Ind. Technology University of Nebraska at Omaha Omaha, NB. 68101
NEW HAMPSHIRE		
Keene Keene State College	June 24 to July 5	Prof. Leonard R. Aldrich Ind. Educ. Department Keene State College Keene, N. H. 03431
NEW JERSEY		
Trenton Trenton State College	July 1 to July 19	Dr. J. Russell Kruppa Div. of Ind. Ed. & Tech. Trenton State College Trenton, N. J. 08625
NEW MEXICO		
Albuquerque University of New Mexico	June 10 to July 5	Dr. A. M. Garrett Ind. Educ./Secondary Ed. University of New Mexico Albuquerque, N. M. 87106
Portales Eastern New Mexico University	June 10 to July 5	Dr. David Goin Ind. Educ. Department Eastern N. M. University Portales, N. M. 88130

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WORLD OF CONSTRUCTION Summer 1974 Workshops

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
NEW YORK		
Buffalo State University College at Buffalo	July 15 to August 2	Mr. Jack C. Love State University College at Buffalo Ind. Arts Education Buffalo, N. Y. 14222
NORTH CAROLINA		
Greensboro North Carolina A & T State University	July 8 to July 26	Dr. C. W. Pinckney North Carolina A & T State Dept. of Ind. Education Greensboro, N. C. 27411
OHIO		
Bowling Green Bowling Green State University (NW Ohio Teachers Only)	June 17 to June 28	Mr. Thomas C. Bach Dept. of Ind. Education and Technology Bowling Green State Univ. Bowling Green, Oh. 43403
Columbus Ohio State University	June 18 to July 19	Dr. Keith Blankenbaker Ohio State University 190 W. 19th Avenue Columbus, Oh. 43210
Kent Kent State University	August 12 to August 30	Professor Scott Layman Ind. Arts Education Kent State University Kent, Oh. 44240
Oxford Miami University	August 5 to August 16	Dr. Gordon E. Martin Dept. of Ind. Education Miami University Oxford, Oh. 45056
OKLAHOMA		
Edmond Central State University	June 3 to June 28	Dr. Loren W. Smith Dept. of Ind. Education Central State University Edmond, Ok. 73034
OREGON		
Corvallis Oregon State University	June 18 to July 5	Dr. Larry Kenneke Dept. of Ind. Education Oregon State University Corvallis, Or. 97331
RHODE ISLAND		
Providence Rhode Island College	June 24 to July 12	Mr. William Kavanaugh Ind. Educ. Department Rhode Island College Providence, R. I. 02908
SOUTH CAROLINA		
Clemson Clemson University	July 1 to July 19	Dr. William E. West Clemson University Department of Ind. Educ. 107 Freeman Hall Clemson, S. C. 29631
SOUTH DAKOTA		
Spearfish Black Hills State College	June 3 to June 19	Mr. Charley Conger Black Hills State College Division of Ind. Arts Spearfish, S. D. 57783
TENNESSEE		
Memphis Memphis State University (Tentative)	June 3 to July 11	Dr. Wilfred M. Bates Div. of Eng. Technology Memphis State University Memphis, Tn. 38152

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WORLD OF CONSTRUCTION Summer 1974 Workshops

Location and Sponsoring Institution	*Workshop Dates*	*For Application Kit, Write:*
Murfreesboro Middle Tennessee State University	June 10 to June 30	Dr. James H. Gonce Dept. of Ind. Arts & Tech Middle Tenn. State Univ. Murfreesboro, Tn. 37130
Nashville Tennessee State University	June 18 to July 9	Mr. Samuel Word Dept. of Ind. Arts & Tech Tennessee State Univ. Nashville, Tn. 37203
TEXAS		
College Station Texas A & M University	June 19 to July 10	Dr. Donald L. Clark Dept. of Ind. Education Texas A & M University College Station, Tx. 77843
San Marcos Southwest Texas State Jniversity	July 12 to August 14	Dr. Joe W. Walker Dept. of Ind. Arts Southwest Texas State Un. San Marcos, Tx. 78666
UTAH		
Provo Brigham Young University	June 24 to July 5	Dr. William E. McKell Ind. Educ. Department Snell Building Brigham Young University Provo, Ut. 84601
VERMONT		
Burlington University of Vermont	June 17 to July 5	Mr. Ernest Levesque Voc. Ed. and Tech. Dept. University of Vermont Burlington, Vt. 05401
WASHINGTON		
Cheney Eastern Washington State College	June 17 to July 3	Mr. Orland Killin Eastern Washington State College Ind. Educ. and Tech. Cheney, Wa. 99004
WISCONSIN		
Shawano U of W - River Falls (to be held at Franklin Middle School, Shawano)	June 10 to June 22	Dr. Russ Gerber Ind. Education and Ag. Eng. Technology U of W - River Falls River Falls, Wi. 54022

WORLD OF MANUFACTURING Summer 1974 Workshops

Location and Sponsoring Institution	*Workshop Dates*	*For Application Kit, Write:*
ARIZONA		
Flagstaff Northern Arizona University	June 10 to June 28	Dr. Robert Wooldridge Northern Az. University Dept. of Ind. Education Flagstaff, Az. 86001
Tempe Arizona State University	July 25 to August 23	Mr. Marlow Keith Division of Technology Arizona State University Tempe, Az. 85281

WORLD OF MANUFACTURING Summer 1974 Workshops

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Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
CALIFORNIA		
Long Beach CSU - Long Beach	August 5 to August 16	Dr. James Ryan Ind. Education Dept. CSU - Long Beach Long Beach, Ca. 90840
San Jose CSU - San Jose	July 15 to August 2	Dr. Donald Betando Ind. Studies Department CSU - San Jose San Jose, Ca. 95114
COLORADO		
Fort Collins Colorado State University	July 15 to August 2	Dr. Marion Mannes Dept. of Ind. Sciences Colo. State University Fort Collins, Co. 80521
GEORGIA		
Mount Berry Berry College	July 1 to July 19	Dr. James N. Lutton Berry College P. O. Box 490 Mt. Berry, Ga. 30149
Statesboro Georgia Southern College	July 8 to July 26	Dr. Louis Selvidge Ind. Arts Department Georgia Southern College Statesboro, Ga. 30458
HAWAII		
Honolulu University of Hawaii	June 23 to August 2	Mr. Frank Kanzaki Dept. of Curriculum and Instruction University of Hawaii Honolulu, Hi. 96822
ILLINOIS		
Chicago Chicago State University	July 1 to August 23	Dr. Norman G. Laws Dept. of Occup. Education Chicago State University Chicago, Il. 60628
Normal Illinois State University	July 22 to August 16	Dr. Franzie Loepp Dept. of Ind. Technology Illinois State University Normal, Il. 61761
INDIANA		
Muncie Ball State University	July 15 to August 15	Dr. R. Thomas Wright Dept. of Ind. Educ & Tech Ball State University Muncie, In. 47306
Terre Haute Indiana State University	June 10 to July 16	Dr. Eldon Rebhorn School of Technology Indiana State University Terre Haute, In. 47809
West Lafayette Purdue University	June 3 to June 14 (AM Only)	Dr. Alan Suess Dept. of Ind. Education Purdue University West Lafayette, In. 47907
IOWA		
Cedar Falls University of Northern Iowa	July 22 to August 2	Dr. Douglas Pine Ind. Arts & Technology University of No. Iowa Cedar Falls, Ia. 50613

WORLD OF MANUFACTURING Summer 1974 Workshops

BEST COPY AVAILABLE

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
Ames Iowa State University	July 29 to August 14 (Tentative)	Dr. Walter Bortz Ind. Education Department Iowa State University Ames, Ia. 50010
KANSAS		
Hays Fort Hays Kansas State College	June 4 to June 28	Mr. Bryan Bachkora Ind. Arts Department Fort Hays Kansas State College Hays, Ks. 67601
Pittsburg Kansas State College	July 1 to July 26	Mr. Clarence Miles Dept. of Ind. Arts Educ. Kansas State College Pittsburg, Ks. 66762
Wichita Wichita State University	June 10 to June 28	Dr. Wayne Becker Ind. Education Department Wichita State University Wichita, Ks. 67208
KENTUCKY		
Murray Murray State University	May 6 to May 22	Dr. Kenneth Winters Murray State University Dept. of Ind. Education Murray, Ky. 42071
LOUISIANA		
Baton Rouge Louisiana State University	July 8 to July 26	Mr. Arthur Hoover Ind. & Tech. Educ. Dept. Louisiana State University Baton Rouge, La. 70803
Hammond Southeastern Louisiana University	June 10 to June 28	Dr. Charles R. Bass Southeastern La. Univ. Ind. Tech. Department Hammond, La. 70401
Natchitoches Northwestern State University	June 24 to July 12	Dr. Needom C. Muns Dept. of Ind. Ed. & Tech. Northwestern State Univ. Natchitoches, La. 71457
MAINE		
Gorham University of Maine at Portland-Gorham	June 24 to July 12	Mr. Howard M. Faulkner Dept. of Ind. Ed. & Tech. University of Maine at Portland-Gorham Gorham, Me. 04038
MASSACHUSETTS		
Fitchburg Fitchburg State College	June 24 to July 5	Dr. George B. James Industrial Arts Dept. Fitchburg State College Fitchburg, Ma. 01420
MICHIGAN		
East Lansing Michigan State University	June 17 to July 2	Dr. G. W. Perns Dept. of Sec. Educ. Curriculum - Ind. Ed. Michigan State University East Lansing, Mi. 48823
MINNESOTA		
Bemidji Bemidji State College	July 22 to July 26	Mr. Larry Yetter Ind. Educ. Department Bemidji State College Bemidji, Mn. 56601

WORLD OF MANUFACTURING Summer 1974 Workshops

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Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
Mankato Mankato State College	June 12 to June 26	Dr. Gordon Gavin Ind. & Tech. Studies Mankato State College Mankato, Mn. 56001
St. Cloud St. Cloud State College	July 15 to July 26	Dr. Gerald E. Nestel Dept. of Ind. Education St. Cloud State College St. Cloud, Mn. 56301
MISSOURI		
Kirksville Northeast Missouri State University	July 8 to July 19	Dr. Robert Stephens Northeast Mo. State Univ. Dept. of Ind. Education Kirksville, Mo. 63501
Warrensburg Central Missouri State University	June 7 to August 16	Dr. Jack Landers Div. of Ind. Arts & Tech. Central Mo. State Univ. Warrensburg, Mo. 64093
NEBRASKA		
Kearney Kearney State College	July 15 to August 2	Dr. Robert Hanson Dept. of Ind. Education Kearney State College Kearney, Nb. 68847
Omaha University of Nebraska at Omaha	June 10 to July 12	Dr. Garry L. Hansen Dept. of Ind. Technology University of Nebraska Omaha, Nb. 68101
NEW HAMPSHIRE		
Keene Keene State College	July 8 to July 19	Prof. Leonard R. Aldrich Ind. Education Department Keene State College Keene, N. H. 03431
NEW JERSEY		
Trenton Trenton State College	July 1 to July 19	Dr. J. Russell Kruppa Div. of Ind. Educ & Tech Trenton State College Trenton, N. J. 08625
Union Newark State College	June 24 to July 1	Dr. John Sladicka Dept. of Ind. Studies Newark State College Union, N. J. 07083
Upper Montclair Montclair State College	July 15 to August 8	Dr. Martin Greenwald Ind. Educ. & Tech. Dept. Montclair State College Upper Montclair, NJ 07043
NEW MEXICO		
Albuquerque University of New Mexico	July 8 to August 2	Dr. A. M. Garrett Ind. Educ./Secondary Ed. University of New Mexico Albuquerque, N. M. 87106
Portales Eastern New Mexico University	June 10 to July 5	Dr. Bill Rosin Ind. Educ. Department Eastern N. M. University Portales, N. M. 88130
NEW YORK		
Buffalo State University College at Buffalo	June 24 to July 12	Dr. J. C. Brueckman, Jr. Industrial Arts Education State University College at Buffalo Buffalo, N. Y. 14222

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WORLD OF MANUFACTURING Summer 1974 Workshops

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
New York New York University - Washington Square	July 1 to August 9	Dr. Marshall S. Hahn Dept. of Voc. Education New York University - Washington Square New York, N. Y. 10003
NORTH CAROLINA		
Greensboro North Carolina A & T State University	June 17 to July 5	Dr. C. W. Pinckney Dept. of Ind. Education North Carolina A & T State University Greensboro, N. C. 27411
NORTH DAKOTA		
Grand Forks University of North Dakota	June 3 to June 14	Dr. Myron Bender Dept. of Ind. Technology Univ. of North Dakota Grand Forks, N. D. 58201
OHIO		
Bowling Green Bowling Green State University (NW Ohio Teachers Only)	July 1 to July 12	Dr. Richard Kruppa Dept. of Ind. Educ & Tech Bowling Green State Univ. Bowling Green, Oh. 43403
Bowling Green Bowling Green State University	July 22 to July 26	Dr. Richard Kruppa Dept. of Ind. Educ & Tech Bowling Green State Univ. Bowling Green, Oh. 43403
Columbus Ohio State University	July 24 to August 21	Dr. William Umstattd Ohio State University 190 W. 19th Avenue Columbus, Oh. 43210
Kent Kent State University	June 24 to July 8	Professor James Lees Industrial Arts Education Kent State University Kent, Oh. 44240
Oxford Miami University	July 22 to August 2	Dr. Robert L. Shearer Miami University Dept. of Ind. Education Oxford, Oh. 45056
OKLAHOMA		
Edmond Central State University	July 1 to July 26	Dr. Loren W. Smith Dept. of Ind. Education Central State University Edmond, Ok. 73034
OREGON		
Corvallis Oregon State University	July 8 to July 26	Dr. Larry Kenneke Dept. of Ind. Education Oregon State University Corvallis, Or. 97331
RHODE ISLAND		
Providence Rhode Island College	July 15 to August 2	Mr. William Kavanaugh Ind. Education Department Rhode Island College Providence, R. I. 02908
SOUTH CAROLINA		
Clemson Clemson University	June 10 to June 28	Dr. Paul C. Caley Dept. of Ind. Education Clemson University 107 Freeman Hall Clemson, S. C. 29631

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WORLD OF MANUFACTURING Summer 1974 Workshops

Location and Sponsoring Institution	Workshop Dates	For Application Kit, Write:
SOUTH DAKOTA		
Spearfish Black Hills State College	June 19 to July 5	Mr. Larry Sattgast Division of Ind. Arts Black Hills State College Spearfish, S. D. 57783
TENNESSEE		
Johnson City East Tennessee State University	July 18 to August 13	Dr. Glenn E. Bettis Ind. Education Dept. East Tenn. State Univ. Johnson City, Tn. 37601
TEXAS		
College Station Texas A & M University	June 3 to June 21	Dr. Donald L. Clark Dept. of Ind. Education Texas A & M University College Station, Tx. 77843
UTAH		
Provo Brigham Young University	July 8 to July 19	Dr. William E. McKell Ind. Education Department Brigham Young University Snell Building Provo, Ut. 84601
VERMONT		
Burlington University of Vermont	June 17 to July 5	Dr. Clair Vance Voc. Ed. and Tech. Dept. University of Vermont Burlington, Vt. 05401
VIRGINIA		
Blacksburg Virginia Poly. Inst. and State Univ.	July 30 to August 9	Dr. William E. Dugger Virginia Polytechnic Inst and State University Ind. Arts Education Blacksburg, Va. 24061
WASHINGTON		
Ellensburg Central Washington State College	July 18 to August 16	Dr. G. W. Beed Dept. of Tech & In. Educ. Central Washington State College Ellensburg, Wa. 98926
WYOMING		
Laramie University of Wyoming	June 17 to July 5	Dr. Lyndall Lundy Dept. of Voc. and Prac. Arts Education University of Wyoming Laramie, Wy. 82070
CANADA		
NEW BRUNSWICK		
Fredericton University of New Brunswick	July 2 to August 9	Mr. John Ross Extension Department University of New Brunswick Fredericktown, N.B.
Moncton University of Moncton	July 2 to August 9	Mr. Rene Lacombe Teacher Education Dept. University of Moncton Moncton, N.B.
NOVA SCOTIA		
Truro Nova Scotia Teacher's College	June 4 to July 16	Mr. Robert Danson Nova Scotia Teacher's College Truro, Nova Scotia

AACTE
DISTINGUISH ACHIEVEMENT AWARD ENTRY

The Ohio State University
College of Education
Academic Faculty of Industrial Technology Education
November 22, 1974

CASE STUDY

Program Description and Development

Only four years ago the undergraduate program in industrial arts teacher education at The Ohio State University was much like hundreds of others. It mirrored the time-worn practices which all too commonly were being employed in the public schools and emphasized the same obsolete subject matter as did the schools. All the graduates of the program were being placed. There was little demand from the field for change. However, a sensitive reading of the leadership, via the professional literature and field contacts, suggested the time was very ripe for change.

In 1971; after five years of study, planning, and experimentation; a completely redesigned industrial arts major was instituted. Major changes also were made in the professional sequence. Only the former changes will be focused upon here, although passing mention will be made of some of the changes which have been made for the purpose of making the professional sequence more important throughout the four-year program.

Students in the program are actively engaged in experiences in the local schools during their freshman, junior and senior years. The earliest field experience involves a two-quarter sequence in which a variety of planned and coordinated visits are made in order to observe the teaching-learning process at a variety of instructional levels and in varied socio-economic settings. This is followed by a one-quarter seminar in which a counselling specialist works to assist the individuals in interrelating the

real-world observations with one's self concept. This is followed by pre-student teaching experiences, which are coupled with methods instruction, and then, in the senior year, by spending the month of September with a practicing school teacher and then spending full-time during one of the regular academic quarters with him.

The revision of the industrial arts major began with an extensive philosophical search for a rational basis for the subject matter discipline--industrial technology. The result of this study was to equate technology with Kotarbinski's definition of praxiology. Technology was identified as a fourth domain of knowledge, parallel to the classical domains of formal, descriptive, and prescriptive knowledge. Further, industrial technology was identified as that subelement of technology which is the knowledge resource of industrial arts. It was defined as that knowledge of practice which has to do with the production, consumption, operation, and servicing of material goods.*

Finally, industrial arts was defined as an organized study of industrial technology. The next step was to find curriculum elements which were: representative of this total body of knowledge, generally mutually exclusive, and a functionally adequate arrangement. The major elements which were identified for the undergraduate curriculum were the following courses in industrial technology.

Foundational Core

1. engineering graphics,
2. the design of constructed and manufactured goods,
3. industrial technology and the school,

* About one-quarter of a million dollars was spent in funding the philosophical study which provides the basic rationale for the structure of this program. One interested in more detail than is provided in this brief paragraph is invited to review EPIC document ED 013 955 A Rationale and Structure for Industrial Arts Subject Matter.

Intermediate Core

4. construction
5. manufacturing
6. electrical and electronic systems and servicing
7. mechanical and power systems and servicing
8. graphic reproduction
9. custom industrial production

Advanced Elective Specialization

10. industrial engineering
11. welding engineering
12. industrial graphics
13. architecture and city planning
14. electrical engineering
15. civil engineering
16. art and design

Within this course structure, several program options are available. A general major was provided. It required fifty-two quarter hours of technical coursework. One electing this option was required to complete an approved teaching minor in a second teaching field. This option provides the student with general certification qualifications and provides a comprehensive background suitable for the instructional requirements in the middle and junior high school.

A comprehensive major was provided which required the completion of an additional twenty-eight hours of technical electives for purposes of providing in-depth preparation in one or more areas. This option provided for advantageous entry to senior high school teaching, in addition to the previous option.

Additionally, individuals can elect to pursue a comprehensive kindergarden through senior high school major by completing the above work and selected additional work with regard to child growth and development, the design and teaching of suitable activities for children, and student teaching in the elementary as well as the secondary school.

The Foundational Core subjects are taken during the freshman year. They are integrated with the professional early field experience and basic humanities, mathematics

and sciences. The engineering graphics subject matter was jointly conceived and structured by members of the engineering college and college of education faculties. Rather than emphasizing traditional mechanical detailing, a year-long, three-course sequence provides a comprehensive orientation to the theoretical foundations of graphic communications as a system of conveying in two dimensions the precise description of a three-dimensional object, using all the standards and conventions of the many fields, such as civil, electrical, and mechanical drafting. The third course provides experiences in non-working drawing kinds of graphic communications such as flow charts, PERT diagramming, and CPM scheduling.

The design course provides experiences in designing constructed and manufactured products. Using the basic design process, it provides opportunities for creative problem solving through use of industrial design technology.

Also in the freshman year is a course "industrial practices and the school". In it, individual skill and technical knowledge profiles are developed. They serve as a basis for student-teacher planning of studies in basic nomenclature, processes, and procedures. That knowledge and those skills already mastered are bypassed; voids are filled. In addition, school visitations are planned in order to provide students with a comprehensive view of the career challenges and opportunities in industrial arts, as well as to verify the need for the variety of technical knowledge and skill which is merely introduced in this first course. Students also are required to make a tentative, comprehensive, individual baccalaureate program outline.

The Intermediate Core and all subsequent courses require the further application and development of the technical knowledge and skills which were developed in the freshman sequence. Construction and manufacturing technology are each introduced in two-course sequences. In each first course, the "front end" work which precedes actual production is learned through actual design and engineering work and prototype construction. The second courses involve actual production work, simulating as closely as possible contemporary construction and manufacturing production settings and practices. In more traditional courses, students typically plan and construct something they personally would like to make, without regard to general market needs,

cost factors, environmental implications, personnel requirements, industrial regulations and standards, and similar prime concerns to modern industry. These are the all-pervasive themes that pervade each course and the entire sequence in this innovative program.

Additional Intermediate Core courses deal with the specialized manufacturing technology of the graphic reproduction phase of industry, power and light electricity and electronics, mechanical and power systems, and custom manufacturing technology. These are all studied as they relate to the broader context of industrial technology. However, in each instance the complexity and uniqueness of the subject matter made it adviseable to teach them as discreet program elements in addition to the coverage they receive in the more generalized courses in construction and manufacturing.

The Advanced Elective Specialization courses are sophisticated, rigorous, advanced courses which are taken by other majors in the University as well as those in this program. Also, the courses are taught by regular professors who are renowned specialists in their respective fields.

Objectives

The objectives of the instruction in the industrial arts major are to enable students to:

1. understand the concepts, principles, generalizations, problems, and strategies of industrial technology.
2. have an interest in and an appreciation for industry as that element of the economic system which provides industrial material goods for the satisfaction of human wants for those goods.
3. demonstrate knowledge and skills that will be useful in the life situations of the industrial arts teacher.

Personnel Involved

Principal participants in the industrial technology instruction are a team of personnel headed by six permanent college of education faculty and six full-time teaching associates who are former classroom teachers and part-time doctoral degree candidates. Also involved are faculty members in the engineering disciplines which teach service courses, which are cooperatively designed especially for industrial arts majors, as well as advanced technical courses. Industrial arts personnel in the greater Columbus area schools also are actively involved in the professional field experiences and as guest lecturers in the on-campus courses.

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Budget

About one-quarter million dollars of USOE monies were expended in the creation of the philosophical rationale for the program. In addition, the University provides a regular continuation budget of more than $23,000 in operating funds which are largely used to purchase expendables. A further allocation of approximately $30,000 per year is expended for graduate assistantships to support the teaching associates within the program. Also, a teaching aids laboratory budget of more than $500 and a computing budget of $600 were appropriated last year to provide instructional technology support.

Contribution to the Improvement of Teacher Education

The most important contribution of the new program is the total movement within which the program redesign occurred. The program was not conceived and developed within a vacuum. That is, exemplary programs were concurrently developed for school use. These school programs created the need for the teacher education program revision, demonstrated the founding philosophy in operational settings, and provided a ready means for graduates to serve as change agents in the schools. One would readily find common agreement within the industrial arts profession that The Ohio State University industrial arts teacher education program, allied with extensive and agressive in-service education and school service activities, has exercised more professional leadership in the past decade than any other.

Evaluation

At the outset, students were more disturbed about the change than any others. They were threatened by the prospects of being taught in a way and in a subject matter which were not similar to their counterparts in the public schools. This resistance to change has dwindled as they have seen consumer demand grow for graduates of the revised program and as they have seen evidence of peer acceptance of the rationale underlying the change. Organized, regular, and uniformly required student evaluation of instruction has provided the major evaluative data for program review and improvement.